

REMARKS

INTRODUCTION

Claims 1-15 are pending and under consideration.

Claims 1-15 have been rejected.

REJECTIONS UNDER 35 USC § 103

Claims 1 and 11-12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Toyama et al. (4,908,547). This rejection is respectfully traversed for the reasons stated below.

Claims 1 and 11-12

The Examiner alleges at page 2 of the Office Action that Toyama et al. disclose each of the features as recited in independent claims 1 and 11 including a light window as being part of the detector 14. Further, the Examiner alleges that although the "recited positioning of the light window is not specifically disclosed, from Figure 3 it is obvious for the light window to be in the recited range of positions for improved sensing of radiation from the index stripes."

It is respectfully submitted that contrary to the assertions made by the Examiner, Figure 3 of Toyama et al., as relied upon by the Examiner, does not teach or suggest the use of a "transparent light reception window provided on said funnel," as recited in independent claims 1 and 11 of the present invention. In contrast with the present invention, Toyama et al. is limited to describing the cathode ray tube of Figure 3 as merely providing "a plurality of photosensors or light receiving elements 14 for sensing the light beam or electromagnetic waves emitted upon impingement of the electron beam on these index stripes 25." (See Col. 1, lines 34-38). The description of the tube of figure 3, at column 1, as relied upon by the Examiner, simply states that sensors 14 "sense the light beam or electromagnetic waves."

Figure 3 of Toyama et al. is a schematic sectional view showing a beam index type color cathode ray tube, and it is uncertain whether a light window and detector 14 are provided at the funnel in the horizontal direction or in the diagonal direction. In addition, Figure 3 does not teach or suggest that a transparent light reception window is provided at a location within a range of 0.1-0.3d from a corner of a seal edge of the funnel. Accordingly, Toyama et al. does not teach or suggest the use of "a transparent light reception window provided on said funnel," as recited in independent claims 1 and 11 of the present invention. Thus, it is respectfully submitted that it

would not have been obvious to one of ordinary skill in the art at the time of the invention to use a light window, such as the ones specifically recited in independent claims 1 and 11 of the present invention, or moreover, to place such light windows at a specific location, also as recited in independent claims 1 and 11 of the present invention.

Applicant respectfully submits that this rejection consists of an impermissible hindsight reconstruction of applicant's claims by referring to applicant's disclosure to modify the invention by Toyama et al. An important concept that should be noted by the Office is that in order to reach a proper determination under 35 U.S.C. § 103, the Examiner must step backwards in time and into the shoes of a hypothetical "person of ordinary skill in the art" at the time when applicant(s) invention was unknown and just before it was made. Further, "knowledge of applicant(s) disclosure must be put aside in reaching this determination, yet kept in mind in order to determine the 'differences,' conduct the search and evaluate the 'subject matter as a whole' of the invention." See M.P.E.P. §2142.

In view of the above points, it is submitted that since the invention by Toyama et al. does not teach or suggest the use of a transparent light reception window, as recited in claims 1 and 11 of the present invention, and hence the positioning of such light reception windows would not have been known without referring to the disclosure of the present invention, a proper rejection under 35 U.S.C. §103 has not been met, and withdrawal of this rejection and allowance of these claims are earnestly solicited.

Further it is respectfully submitted that for at least the reason that claims 2 and 3 depend from allowable independent claim 1, and claims 12 through 15 depend from allowable independent claim 11, these claims are also allowable.

Claims 2-10 and 13-15

Claims 2-10 and 13-15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Toyama et al. in view of Kuwabara et al. (5,952,767). This rejection is respectfully traversed for the reasons stated below.

As pointed out above, it is respectfully submitted that Toyama et al. does not teach or suggest "a transparent light reception window provided on said funnel," or "wherein when a diagonal length on an outer surface of said funnel is "d," said light reception window is provided at a location within a range of 0.1-0.3d from a corner of a seal edge of said funnel," as recited in independent claim 1 of the present invention. Further, it is respectfully submitted that Toyama et

al. does not teach or suggest "light reception windows respectively on each of said funnels," or "wherein when a diagonal length on an outer surface of each of said funnels is "d," each of said light reception windows is provided on a location within a range of 0.1-0.3d from a corner of a seal edge of each said funnel," as recited in independent claim 4 of the present invention. Further, it is respectfully submitted that Toyama et al. does not teach or suggest "a transparent light reception window provided on said funnel," or "wherein said light reception window and said detector are mounted on a location within a range where a periphery index light intensity is detected to be higher than a central index light intensity," as recited in independent claim 11 of the present invention.

In addition to the above comments, it is respectfully submitted that although Kuwabara et al. illustrates plural light sensing units 19 positioned on a rear plate 9 to detect index signal lights, these sensing units 19 are limited to being aligned in rows and columns adjacent to each other along the rear plate 9, and therefore are not taught or suggested to be positioned in any specific manner, such as the reception window(s) recited in independent claims 1, 4 and 11 of the present invention, as pointed out above. Accordingly, it is respectfully submitted that since neither Toyama et al. nor Kuwabara et al. teach or suggest each of the features recited in independent claims 1, 4 and 11, these claims are allowable over both Toyama et al. and Kuwabara et al., separately, or in combination thereof, and withdrawal of this rejection and allowance of these claims are earnestly solicited.

Further, it is respectfully submitted that for at least the reason that claims 2-3, 5-10 and 13-15 depend, respectfully, from allowable claims 1, 4 and 11, each of these claims is also allowable over both Toyama et al. and Kuwabara et al., separately, or in combination thereof. Accordingly, withdrawal of this rejection and allowance of these claims are earnestly solicited.

DOUBLE PATENTING REJECTION

Claims 1-15 were rejected under the judicially-created doctrine of obviousness-type double patenting as being unpatentable over claim 14 of U.S. Patent No. 6,400,085 in view of Toyama et al. This rejection is respectfully traversed for the reasons stated below.

As pointed out above, contrary to the assertions made by the Examiner, Toyama et al. does not teach or suggest "a transparent light reception window provided on said funnel," or "wherein when a diagonal length on an outer surface of said funnel is d, said light reception window is provided at a location within a range of 0.1-0.3d from a corner of a sealed edge of

“said funnel,” as recited in independent claim 1 of the present invention. Similar comments apply regarding independent claims 4 and 11, which recite similar features as pointed out above. Accordingly, since the combination of U.S. Patent No. 6,400,085 in view of Toyama et al. does not teach or suggest each of the features recited in claims 1-15 of the present invention, withdrawal of this double patenting rejection is earnestly solicited.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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